

## CHAPTER 3

### RESEARCH METHODOLOGY

The research would be done through a questionnaire design.

#### 3.1 Sampling Design

The technique used is a nonprobability techniques and thus would be based on personal judgement and convenience. Respondents from not more than 10 companies would be used for the analysis. (The sampling is quite arbitrary as a lot depends on those who are assigned to distribute.) In this case a quota sampling is used , in which 10 respondents from at least 10 different companies spread through out the Klang Valley are requested to respond to the questions. This is done so that population sample is well distributed. Aggregating the various questionnaires yields a sample representing the desired scope of the project.

#### 3.2 Sample Size

A total of 100 respondents sampled at random. The sampling used was nonprobability type. A total of 75 question was used for this survey.

#### 3.3 Instrument used: Self- completion questionnaires

Self-completion questionnaires were used because they have number of advantages. They are as follows:

- They are low cost since there is no interview time involved and they eliminate all the problems associated with the interviewing process, such as bias, central tendency, halo-effect, etc.

- They are the least intrusive form of data collection, offers complete anonymity and avoids problem associated with sensitive or embarrassing questions.
- The choice of distributing the questions are wide (fax, door-to-door, mail, point-of-sale,etc). For this project, personal delivery was done to ensure response rate.

**3.4 Selection of Measures:**

<b>Construct</b>	<b>Scale</b>
a. <i>Demographic Profile</i>	Nominal
b. <i>General Information</i>	Nominal
c. <i>Service Gaps</i>	Likert Scale ranging from
Promotional Gaps Understanding Gaps Procedural Gaps Behavioral Gaps Perception Gaps	1-" Completely Disagree"  to 10-"Completely Agree"
d. <i>Breakdowns</i>	Nominal
Breakdown in Communication due bad location, weather or connection.	

**e. Connection**

Time to get new connection, waiting period and bad connection or interferences.

Likert Scale ranging from

1- "Completely Acceptable"

7-"Completely Unacceptable"

and 1- "Totally agree" to

5- "Totally Disagree".

**f. Staffs of Service Provider**

Using a Likert Scale of 1 –10, the following is measured:-  
Efficient, Courteous, Helpful,  
Professional, Friendly,  
Respectful, Reassuring,  
Concerned, Problem Solving and  
Knowledgeable.

Likert Scale ranging from 1

- "least positive" to 10 –"most

positive". Two questions from

this section uses a Nominal

Scale to measure expectation

and satisfaction.

**g. Servqual Questions**

Likert Scale ranging from 1-

"Strongly disagree" to 10 -

"Strongly Agree"

**3.5 Data Collection Procedure**

The respondent would participate by filling out the questionnaire and return them on completion. To minimize errors, the questionnaire was thoroughly examined

for improper design elements. As there is no personal interview, the respondents are free to express his views without any inhibitions.

### **3.6 Data Analysis Techniques**

The following data analysis techniques are used :-

#### **3.6.1 Characteristics of the respondents**

A frequency analysis will be performed on all the variables. The purpose is to Identify the data that are irrelevant and could influence the validity of the survey. This analysis would also eliminate errors due to collection, not answered and missing.

Having done this, attempt would be made to establish relationships between the demographics profiles and relevant sections such as section F and G of the questionnaire. Wherever appropriate, cross-tabulation will be done using Chi-square method.

#### **3.6.2 Factor Analysis**

The primary purpose of the factor analysis is for data reduction and summarization. The general purpose is to summarize the information contained in large number of variables into a smaller number of factors. The latent root criterion using Eigenvalues  $>1$  would be used. The rationale for the eigenvalue criterion is that any individual factor should account for at least the variance of a single variable if it is to be retained for interpretation. The eigenvalue approach is probably most reliable when the number of variables is between 20 and 50 (Hair et al, 1992).The results of the first stage is the Unrotated component factor

analysis matrix. However for this survey, the orthogonal factor rotation method or VARIMAX will only be used. The statistical technique of factor analysis utilizing the SPSSx software program is used to identify the dimensions by means of principal component factor model and orthogonal factors solution.

This section will also determine dimensions of perceived service quality among Cellular Network Providers. These dimensions have been extracted through factor analysis on the SERVQUAL and GAP model corresponding expectation and perception items. The analysis will be carried out across all respondents.

### **3.6.3 Reliability assessment**

Reliability is defined as the degree to which a measurement scale is free from error, yielding consistent results. The technique is to compute the reliability coefficient, using the Cronbach-Alpha method. Reliability will be done for both the Serqual and Gap Analysis Model. The reliability is done on the dimensions identified from the factorial analysis. This will validate the accuracy of the scale in each of the dimensions in delivering consistent results.

### **3.6.4 Determination of Customer satisfaction Index**

Average of each score on all the questions of Section F for all the 100 respondents for each would be determined. The average of all these averages would then be computed in terms of a percentage which would be the basis of satisfaction index. Analysis will be done to determine whether there are any relationship between the demographic profile with to the satisfaction index.